DOCUMENT RESUME

ED 102 107 SP 008 887

AUTHOR Mann, Philip H.; Suiter, Patricia A.
TITLE Auditory Channel Problems.
NOTE 8p.

EDRS PRICE MF-$0.76 HC-$1.58 PLUS POSTAGE
DESCRIPTORS Aphasia; Audiolingual Skills; Auditory Discrimination; Auditory Perception; *Auditory Training; *Aurally Handicapped; *Behavior; Listening Comprehension; *Memory; Teacher Education

ABSTRACT

This teacher's guide contains a list of general auditory problem areas where students have the following problems: (a) inability to find or identify source of sound; (b) difficulty in discriminating sounds of words and letters; (c) difficulty with reproducing pitch, rhythm, and melody; (d) difficulty in selecting important from unimportant sounds; (e) difficulty in blending sounds into words; (f) difficulty in understanding environmental sounds; and (g) difficulty in associating sounds of words with meaning. The document then outlines nine specific deficits, certain behaviors by which deficits may be recognized, and ways to ameliorate the situation. (PB)

ITEM NO 164
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AUDITORY CHANNEL PROBLEMS

Developed by:

Dr. Philip H. Mann and
Mrs. Patricia A. Suiter
for use by students in the BEPD
Training Program, University
of Miami, Coral Gables, Florida

GENERAL PROBLEM AREAS

1. Cannot find or identify source of sound.
2. Difficulty in discriminating sounds of words and letters.
3. Difficulty with reproducing pitch, rhythm, and melody.
4. Difficulty in selecting the important from unimportant sounds.
5. Difficulty in blending sounds into words.
6. Difficulty in understanding environmental sounds.
7. Difficulty in associating sounds of words with meaning.

SPECIFIC DEFICITS

I. Auditory Acuity

A. Vibrator (sound producer) -- acoustic signal (sound in air) Mechanical signal (eardrum) -- hydrolic signal (inner ear fluid) -- electrical signal (Cochlean Nerve) -- auditory signal (cortex of brain).

B. Behavior

1. Cups ears.
2. Restlessness -- poor behavior.
3. Cannot follow directions.
4. Asks for repetitions.

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C. Amelioration

1. Change seat.
2. Auditory amplification.

II. Auditory Perception

A. Auditory Attention to Sound

1. Behaviors

a. Distracted by competing auditory or visual stimuli.
b. May appear to be emotionally disturbed.
c. May appear to be severely retarded.
d. No meaning from sound

2. Amelioration

a. Amplify to create awareness

b. Attract attention with toys and musical instruments.
c. Turn child's head toward sound.

B. Sound Localization

1. behavior

a. Cannot find source or direction of sound.
b. Doesn't know that different people have different voices or that sound is specific to the person making it.

2. Amelioration

a. Finds sounds of bells and social sounds when blindfolded then with sight.

C. Sound Discrimination

1. Behavior

a. Cannot tell when sounds are the same or different.
b. Problems with frequency, intensity, pitch and loudness.
c. Problems with human vs. non-human sounds.
d. Problems with similar sounds: d/t/p.
e. Problems with phonics and blending.
f. Test with Wepman, P.E.R.C. (Drake, 1965), Boston University, Speech Sound Discrimination test.

2. Amelioration

a. Begin with grossly different sounds.
b. Space for contrast
c. Use sounds in nature, etc.
d. Move to more specific finer sounds.

D. Auditory Figure Ground

1. Behavior

a. Cannot sit still, distractable.
b. Unable to attend to speech sounds.
c. Attends to irrelevant sounds.

2. Amelioration

a. Select relevant from irrelevant sounds - use tapes or records.
b. Screen out other stimulus - reduce environmental sounds.
c. Drugs under strict supervision.
d. Regulate presentation (rate of input)

E. Auditory Closure (blending)

1. Behavior

a. Cannot blend sounds or syllables

2. Amelioration

a. Listen to blending of tones.
b. Use anagrams - to practice blending.
c. Analysis and synthesis.
d. r at - rat - then go to word families.
e. Use words based on the child's experience.
f. Build letters in clay and physically blend them into words.

III. Auditory Memory (Reauditorizing)

A. Behavior

1. Cannot remember or recall sounds of things; (a) non-verbal such as bells or animals (b) verbal such as letters, words or sentences.
2. Cannot follow or remember directions.
3. Cannot sequence what he has heard.
4. He generally can understand and recognize words, but cannot retrieve them.

B. Amelioration

1. Tell me games - remember sequence

a. What did I do? (action games)
b. What did you do? (sentence completion - "On the way to school, I....")

2. Sing songs, learn finger plays and poems, nursery rhymes, jokes and riddles.
3. Listen to words, how many did you hear? In what order?
4. Place object on flannel board and clap for each one.
5. Listen to social sounds and identify in sequence.
6. Chunking exercises - Example: Use telephone numbers to learn the grouping and rhythm of long numbers.
7. Sequence stories - I went to the store and bought ....
8. Echo games - whisper a word, a phrase, or a sentence and it goes around the room.
9. Rhythm patterns.
10. Follow commands.
11. React to the different sentence or word - i.e., open, open - open, close, open.
12. Use listening records.

IV. Auditory Language

A. Receptive Language Defects (get meaning from symbols)

1. Behavior

a. Cannot associate words with meaning; can hear but does not understand.
b. Cannot relate spoken or written word to the appropriate unit of experience.
c. Often called Aphasia.
d. Frustrated by conversation.
e. Problems with adjectives and adverbs.
f. Affects verbal expression.
g. Affects reading, writing and arithmetic as well as spoken language.
h. Does not carry out directions.

2. Amelioration

a. Begin with sound vs. no sound.
b. Identify sound source activities.
c. Identify like and unlike sounds.
d. Identify phonemes; think of a word that begins like boy.
e. Picture match games.
f. Match animal sounds with pictures.
g. Match social sounds with pictures.
h. Clap hands when you hear correct word (read story)
i. Collect and use rhyming pictures to help child hear like sounds.
j. Ask short questions requiring one concept short answers.
k. Build vocabulary - use words in experience only.
l. Train to describe - use simple pictures of objects.

V. Auditory Expressive Language

A. Reauditorization

1. Cannot recall words for use.
2. Cannot produce these words in speaking.
3. Cannot express ideas in complete sentences.

B. Behavior

1. Can repeat immediately after, but cannot recall.
2. Use gestures and vocalizations.
3. Can recall meaning when they see or feel object.
4. Reads better silently than orally.
5. Non-fluent speech; hesitations like stuttering.
6. Cannot sequence ideas.

C. Amelioration

1. Slow down input.
2. Reduce anxiety.
3. Wait for response - don't rush him.
4. Say, "Do you mean...."
5. Give him clues -first letter of word.
6. Reduce spoken language at first.
7. Cueing - I write with a ------
8. Associative ideas - pairs - categories - bread and _____, etc.
9. Picture associations.
10. Opposites and similarities.
11. Encourage child to use words (instead of gestures) and complete sentences.

VI. Auditory-Motor Sequence or Integration (poor speech patterns)

A. Behavior

1. Cannot control or recall (retrieve) the motor act of speech.
2. Problem with execution or articulation.
3. Cannot even imitate words.
4. Uses gestures or pantomime.
5. Tongue appears to be lost in mouth during speech.

B. Amelioration

1. Make child aware of sounds and movement of organs of speech in making them.
2. Positioning and feel of organs of speech.
3. Use mirror to illustrate positioning.
4. Visual approach.

   a. Follow the leader games - look, listen, and imitate.
   b. Blowing, smiling, licking tongue movements.
   c. Establish motor pattern, introduce sound, reinforce it, convert it into a word.

5. Verbal approach.

   a. Give child specific verbal directions as how to produce the sound

6. Motor-Kinesthetic approach

   a. Use tongue depressor, lollipop to guide placement.
   b. Use peanut butter for contact points.
   c. Teacher should over articulate.
   d. Child feels his throat.
   e. Reinforce word by using in sentence or situation at hand.

7. Use speech therapist as a resource person.
8. Teacher repeats word correctly at first without correcting child each time.
9. Go slowly.

VII. Formulation and Syntax Problems
(Cannot express ideas using words in complete sentences)

A. Behaviors

1. Understands what you say, but answers in single words or phrases with inadequate language structure.
2. Omits words, distorts order of words, uses poor tense.
3. May recognize correct sentence structure but cannot reproduce.
4. Limited auditory memory.
5. Emits strange sounds for words.
6. Uses telegraphic speech - mom - dad - me - go

B. Amelioration

1. Have child verbalize actions during meaningful play.
2. Pictures - have child name objects.
3. Teacher elicits response from child by using sentences and leaving out a word - child supplies word.
4. Scramble words and build sentences.
5. Sequential pictures, comic strips
6. Build on simple stories.

VIII. Written Language

A. How to identify or recognize this problem.

1. Individuals with problems in oral expressive language, tend to write the way they speak.
2. Those with reauditorization problems are less consistent in their written errors than are those with difficulties in formulation.
3. They are unable to recall words for either written or oral expression.
4. Some can recall visual image of a word that they cannot recall auditorially, their written work may be somewhat better than their spoken language.

B. Remediation Techniques

Many of the educational procedures listed in the preceding sections could be used in the remediation of the written language. The only substitution would be written instead of oral exercises. Most of the work would involve the child at the particular level he is in in his reading program and not his written or speaking program.

Some suggestions are:

1. Have the child write sentences. Read them aloud. When he identifies an error, make the corrections on his paper.
2. The next step is to have him monitor his own written work by having him read it aloud to himself, checking every word as he says it. Much later, he will learn to reauditorize to himself while scruitinizing the printed words.
3. Write sentences containing one, then two errors. Ask the child if the one he hears is the same as the one he sees, e.g.

Written	Read
Mother went the story yesterday.	Mother went to the store yesterday.
The boy fell off him bicycle.	The boy fell off his bicycle.
Tomorrow we skating in the pond.	Tomorrow we will skate in the pond.

4. The child is given a group of word cards which must be arranged in the order spoken by the teacher. (e.g., the children are going to school). The child first arranges in the proper order and then copies the cards.

IX. Auditory Problems in Arithmetic

A. The problem of reauditorization will keep the child from quickly recalling numbers. He recognizes the correct number when he sees it, but cannot say the one he wants. Rapid oral drills are frustrating for him and should be avoided until reauditorization has improved.
B. He may not be deficient in understanding quantitative relationships and may do quite well in computation as long as it is written and not oral.
C. All oral work in both computation and problem solving should be kept to a minimum until the deficit area has been sufficiently strengthened.
D. The same educational techniques can be used with little modification in the area of arithmetic as are suggested in the other three areas. Throughout the training period emphasis should be placed on logic and rational thought rather than on rote memorization.